MODIS sensor Working Group (MsWG) Summary June 02, 2004

Attendance: Bill Barnes, Bob Barnes, Stuart Biggar, Vincent Chiang, Roger Drake, Gene Eplee, Hector Erives, Gerhard Meister, Chris Moeller, Vince Salomonson, Junqiang Sun, Gary Toller, Eric Vermote, Zhengming Wan, Aisheng Wu, Jack Xiong

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Scheduled Agenda

Item 1: LUT and Code delivery

JX) Aqua V4.3.1.7 is a regular delivery for m1 update. The new code that handles subsetted L1As will be only sent to Ocean Group (SeaWiFS), but not to DAAC.

VS) To be clear, DAAC will only process full set of L1A and L1B; SeaWiFS can do the subsets. MCST will provide LUTs for both and document/archive the delivery. (GM: SeaWiFS also tracks the delivery history.)

Item 2: Terra B27 Ch5 (PO) gain changed on day 04139 (May 18)

JX) This detector changed the gain b1 about 6% on day 139 at 13:30 GMT just over SAA (see attachment pages 2-3). We checked scan-to-scan NEdT and it's a little noisier than before.

Item 3: Terra B28 Ch10 (PO) status

JX) Chris sent us some charts about the behaviors of this detector. Page 4 shows the recent b1 and NEdT trends of Band 28. The NEdT is the granule average result. The individual scan-to-scan NEdT is higher than that. We will flag it as noisy detector.

Item 4: Terra SRCA 10W backup lamp #4 status

JX) Recent SRCA radiometric test (on 04146) results show the backup lamp is normal. We can continue to use this lamp for the future.

Item 5: Lunar comparisons

JX) The differences in the lunar data comparison charts (pages 5-10) show how good MODIS tracks the Kieffer's model, and the difference between Terra and Aqua. In Terra's 4 years data, Bands 17, 18, and 19 have larger difference compared to Kieffer's. For Aqua, we only have two years data. Kieffer's data was sent by the Ocean group.

VS) Why the lunar data tends to increase in time? (GE: It could be the libration.)

SB) The libration cycle is 15-16 years. Kieffer's model probably does not track that well.

Bob) There is no absolute guaranty that Kieffer's result is hundred percent correct.

VS) And why the ratio of MODIS/Kieffer goes up in longer wavelength? (Pages 9-10)

Bob) It could be Kieffer's model is using the Moon's sample that has iron substance that is not detected by MODIS. Also there is a little view geometry issue involved in his model.

JX) Overall, the difference between Terra and Aqua is about 2% in the lunar irradiance.

Around the Table

Participant: Bob Barnes – Lunar comparisons

Bob) Among all 12 bands for the comparison, 8 bands have less than 1%, 3 bands less than 2%, and 1 band for about 2.4%. We are looking for a way to cross-calibrate MODIS and VIIRS using the Moon.

Participant: Vince Salomonson – Science Team Meeting announcement

VS) The Science meeting will be on July 13-15 at BWI Marriott Hotel. Bring your posters there. The poster section starts in the afternoon on the 1st day and stay for the rest of the meeting.

JX) On the 2nd day, 7/14, from 7 to 9 PM is the MCST Workshop presentation.

Participant: Stuart Biggar and Zhengming Wan – Field campaigns

SB) Next month we have field campaign for MODIS, MISR, ASTER, and EOI altogether.

ZW) We had some campaign measurements last week.

Participant: Chris Moeller – Terra B28 Ch 10 striping issue; One day global data set RVS test; Code for L1B de-striping.

CM) The new TEB RVS table does not cover 2003. We would like to have a LUT for us to do at least 1-day global test. Eventually we still want to have full 8-day coverage.

CM) Liam Gumley has submitted the Fortran 90 code for atmosphere L1B de-striping for collection 5 reprocess.

JX) Collection 5 reprocess for Terra will be using DSM RVS for entire mission if the test results are good. As for the de-striping, it will be done after L1B for atmosphere.

RD) RVS does change with mirror contamination.

Bill) TRMM will do a pitch maneuver for DSM RVS at the end of the mission.

Action: VC will coordinate the LUT delivery to SDST for the atmosphere test.

Participant: Roger Drake – Noisy detectors issue

RD) If more noisy detectors becoming an issue, we can try re-bias the PV detector's Vdet that could bring back some good detectors.

JX) At the beginning of the mission we did a lot of Vdet/Itwk tests and tried to get the best bias setting for the PV.

Bill) We did spend a lot of tests on that but ended up with nothing.

VS) At this time, I don't want to change that.

Participant: Eric Vermote – A draft paper

EV) I have a draft paper to be circulated. Maybe I will send out before next meeting.

Next MsWG meeting June 16, 2004